24327

SUPERFUND FINAL CLOSE OUT REPORT

Cedartown Municipal Landfill Remedial Action
Cedartown, Polk County, Georgia

I. INTRODUCTION

This Final Close Out Report (FCOR) documents that the United States Environmental Protection Agency (EPA) and the Potentially Responsible Parties (PRPs) have completed all construction activities for the Cedartown Municipal Landfill Remedial Action in accordance with the November 2, 1993 Record of Decision (ROD) signed by Mr. Patrick M. Tobin, Acting Regional Administrator for Region 4 of the EPA; the May 1996 Explanation of Significant Difference; the May 11, 1998 ROD amendment signed by Mr. Richard D. Green, Director, Waste Management Division of Region 4 of the EPA; and in accordance with *Procedures for Completion and Deletion of National Priorities List Sites and Update* (OSWER Directive 9320.2-3C). EPA conducted inspections in December 1995 and January 1996 and determined that the PRPs' contractor has constructed the remedy in accordance with the remedial design (RD) plans and specifications. The PRPs provided written confirmation that the construction was complete via correspondence dated February 2, 1996 and March 30, 1996. EPA has determined that the remedial action has been successfully executed.

II. SUMMARY OF SITE CONDITIONS

Background

The Site is located in Polk County on the outskirts of the City of Cedartown, Georgia, approximately 62 miles northwest of Atlanta, Georgia. The Site encompasses a former iron ore mine which subsequently was used as a municipal landfill. The Site is situated on the western edge of Cedartown and is bordered on the east by Tenth Street, the south by Route 100 (Prior Station Road), and the north and west by undeveloped and/or agricultural land. The Site lies within the limits of the City of Cedartown. Property immediately east of the Site consists of an industrial complex, while land to the north, south, and west is a mixture of residential, agricultural, and undeveloped land.

The Site, which consists of land formerly used as part of the landfill operations, occupies approximately 94 acres. The Site itself is well vegetated with wooded areas along the north, south, and west. A seasonal stream and pond, which appear during periods of high precipitation, exist approximately 700 feet west of the western Site perimeter. The eastern half of the Site is covered by thick grasses. Approximately 10 acres of land, situated between the eastern and western halves of the Site, were not used for landfill operations. This area includes the pond situated directly behind the former Rome Coca-Cola Bottling Company building (referred to herein as the "Coke Pond") and the lands in and around the former Leary residence (formerly situated immediately north of the Coke Pond).

The surface of the Site is grassed with limited areas of mainly exposed soil occurring northeast of the location of the former Leary home. The crown of the Site is 872 feet above mean sea level (AMSL)

and gently slopes on all sides with the exception of portions of the western perimeter which are relatively steep (9 percent slope). During the RI/FS, minor areas of surficial erosion were observed in the central, northwest, and eastern portions of the Site. Evidence of erosion has not been observed during recent inspections by the City of Cedartown. No exposed refuse was observed in any of the erosion areas. One leachate seep was observed on-site. In regularly inspections of the seep, no changes have been observed.

Although the Site is not fenced, access is limited due to the dense vegetation which occurs around the northern, western and southern boundaries. The primary access route from the east directs traffic past the City garage and is restricted by a fence gate which limits vehicle access to the Site.

The Site was originally developed in the 1880s as an iron ore strip mine. Mining operations continued at the Site, with some interruptions, until the mid 1900s. At that time, portions of the Site were leased and/or subsequently acquired by the City of Cedartown for development as a municipal landfill.

Pits resulting from the strip mining operations were utilized by the City of Cedartown and Polk County as disposal areas for municipal and, to a lesser extent, industrial wastes. These pits contained native clay or may have been partially backfilled with clay previously stockpiled from the mining operations prior to placement of waste materials. Once waste was in place, the pits were covered and graded.

This type of operation is significantly different from common landfill operations of the period where wastes were placed in large common fill disposal cells with occasional daily and/or interim cover - material. The lack of on-going, irregular settlement of the existing cap may be attributable to the shallow intermittent disposal practices which occurred.

While the landfill received primarily municipal solid sanitary waste during its operation, limited quantities of industrial waste were also reportedly disposed at the Site. The industrial wastes disposed of at the Site include but are not limited to the following:

i) sludge from an industrial waste water treatment system;

ii) animal fat and vegetable oil skimmings from a separation unit;

iii) liquid dye wastes;

iv) latex paint and paint sludges; and

v) plant trash.

In 1979, in accordance with then applicable State regulations pertaining to the closure of landfills, the Site was covered with a layer of clay soil varying in thickness from one to 12 feet. A vegetative cover was then established over the soil layer to prevent erosion.

Remedial Planning Activities

On June 6, 1985, a representative of USEPA completed an initial Site inspection to evaluate conditions at the Site and identify areas of potential investigation. In October 1986, an initial reconnaissance of the Site was completed by representatives of USEPA. Subsequently, during 1987 and 1988, an investigation of the Site was conducted.

USEPA evaluated the Site using the Hazard Ranking System (HRS)(40 CFR 300 Appendix A). The aggregate HRS score derived for the Site evaluated by USEPA was 33.62. The Site was subsequently proposed for inclusion on the National Priorities List (NPL) in June 1988 and finalized in March 1989.

Field work for the RI began in 1991 and was completed in 1993. The RI was designed to determine the nature and extent of contamination in order for a remedy selection to be made. Field work for the RI included installing monitoring wells and sampling soils, sediments, leachate, landfill waste, surface water and ground water. Cedartown Municipal Landfill PRPs' committee completed the Remedial Investigation (RI) and Feasibility Study (FS) in July 1993 under EPA oversight pursuant to EPA's 1990 Administrative Order of Consent (AOC).

EPA issued a ROD on November 2, 1993. The remedy selected in the ROD was groundwater and surface water monitoring with a pump and treat contingency for groundwater, institutional controls to limit land use, and cover maintenance and seep controls. Groundwater and surface water monitoring was selected due to the likelihood of natural attenuation reducing contaminant concentrations. The ROD specified that a review of groundwater monitoring data would occur after two years to determine whether groundwater performance standards continued to be appropriate and if natural attenuation processes were effective in reducing groundwater concentrations of contaminants.

EPA issued an Explanation of Significant Differences (ESD) in May 1996 for the site. The ESD changed the groundwater performance standard for manganese from 175 ug/l to 840 ug/l. This modification reflected changes in EPA's determinations regarding the bioavailability of manganese.

Remedial Construction Activities

The Remedial Action (RA) was initiated on November 4, 1994 with the approval of the RD/RA Work Plan. Construction began in December 1995 and involved installation of an additional monitoring well and decommissioning wells which were not necessary. The work was conducted by the PRPs' contractor, Conestoga-Rovers. EPA provided inspections of the construction activities in December 1995 and January 1996. The wells not needed for future monitoring were decommissioned according to the RD/RA work plan when possible. Deviations from the work plan were documented. Well development data identified initial concerns with high turbidity in the new monitoring well. The well was redeveloped and subsequent data confirmed that the well was properly constructed and developed.

The monitoring system consists of three background wells and seven perimeter wells. Three wells located within the landfill also were monitored for informational purposes, but the data were not included in the analysis for performance standard compliance. A pond located near the site was monitored to ensure seep controls are effective.

On May 11, 1998 EPA signed a ROD amendment which modified the selected remedy to institutional and engineering controls. EPA's rationale for modifying the remedy was based on new information obtained during the Remedial Action phase. In the original ROD, EPA selected groundwater monitoring to ensure that the contaminants were reduced by natural attenuation and did not migrate away from the site, implementation of a pump and treat system if groundwater performance standards were not met, and continued groundwater monitoring until EPA approved a five-year review concluding that the alternative had achieved continued attainment of the performance standards. Groundwater monitoring for two and one-half years demonstrated that groundwater contamination levels for all contaminants of concern, except manganese, are below performance standards. Groundwater concentrations of manganese have remained stable in the wells which are contaminated. Manganese contamination has not moved to more distant wells. In addition, EPA analysis of groundwater data demonstrates that manganese contamination in the wells exceeding the groundwater performance standard does not appear to be related to landfill impacts.

III. DEMONSTRATION OF QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) FOR CLEANUP ACTIVITIES

All water sample collection activities at the site were conducted in accordance with EPA protocols. The laboratory utilized for analysis of groundwater and surface water samples was Quanterra Incorporated in North Canton, Ohio. A Level IV Analytical Data Package was reviewed by EPA and found to be acceptable.

IV. MONITORING RESULTS

EPA and the Georgia Environmental Protection Division have analyzed two and one-half years of groundwater and surface water monitoring data. The data have demonstrated that groundwater contamination levels for all contaminants of concern, except manganese, are below performance standards. Groundwater concentrations of manganese have remained stable in the wells which are contaminated. Manganese contamination has not moved to more distant wells. In addition, EPA analysis of groundwater data demonstrates that some manganese contamination may be caused by mining activities which occurred before the site was used as a municipal landfill.

Institutional controls have been implemented for the project. These controls included the placement of deed restrictions on landfill and adjacent property to restrict the installation of groundwater wells. The controls also included the annexation of all landfill property into the City limits. The City of Cedartown has prepared and executed the appropriate documentation. A final inspection will not be necessary for this project, since concerns discussed above regarding the installation and development of the monitoring well were addressed immediately after installation of the well.

V. SUMMARY OF OPERATION AND MAINTENANCE

Site operations and maintenance activities include annual inspections of the site to ensure that the landfill cover remains protective and that seep controls are effective.

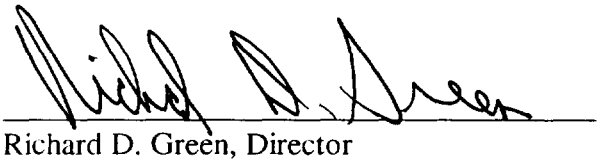
VI. PROTECTIVENESS

This site meets all the site completion requirements as specified in OSWER Directive 9320.2-3C, *Procedures for Completion and Deletion of National Priorities List Sites and Update*. Specifically, confirmation sampling verifies that the site has achieved the ROD cleanup objective, that groundwater use is restricted in areas where groundwater performance standards are exceeded by institutional controls. In addition, landfill cover maintenance and seep controls are continuing. All remedial actions specified in the ROD, as amended, have been implemented. A bibliography of all reports relevant to the completion of this site under the Superfund program is attached. These documents are available by calling the Regional office at (404) 562-4300.

VII. FIVE YEAR REVIEW

Per EPA guidance, a five year review of this project is necessary to ensure continued protection of human health and the environment. The five year review will focus on the appropriateness of the performance standards. This review will include a groundwater sampling event to verify compliance with the performance standards and the continued protectiveness of the selected remedy.

The five year time frame begins with the start of remedial action which, for this project, is November 1994. Therefore, the five year review should be completed prior to November 1999 and will be conducted pursuant to OSWER Directive 9355.7-02, "Structure and Components of Five Year Reviews."



Richard D. Green, Director
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VIII. BIBLIOGRAPHY

1. August 24, 1983. Remedial Investigation Report, Conestoga-Rovers & Associates (for Cedartown Municipal Landfill Potential Responsible Party Group).

2. August 24, 1983. Feasibility Study Report, Conestoga-Rovers & Associates (for Cedartown Municipal Landfill Potential Responsible Party Group).

3. November 2, 1993. Record of Decision - Summary of Remedial Alternative Selection, EPA Region 4.

4. May 1996. Explanation of Significant Difference, EPA Region 4.

5. February 2, 1998. Remedial Action Report, Conestoga-Rovers & Associates (for Cedartown Municipal Landfill Potential Responsible Party Group).

6. March 23, 1998. Memorandum from Kay Wischkaemper to Annie Godfrey regarding assessment of sampling data from Cedartown Landfill.
7. May 11, 1998. Amended Record of Decision - Summary of Remedial Alternative Selection, EPA Region 4.